

Substitute for form 1449A/PTO			<i>Complete if Known</i>	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)			Application Number	10/579,620
			Filing Date	April 19, 2007
			First Named Inventor	DeFrees, Shawn
			Group Art Unit	1654
			Examiner Name	Heard, Thomas Sweeney
Sheet	1	of	7	Attorney Docket Number
40853-01-5145-US01				

U.S. PATENT DOCUMENTS				
Exr Initials	U.S. Patent Document		Name of Inventor or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
	Number	Kind Code (if known)		
	2002/0137134	A1	Gerngross et al.	Sept. 26, 2002
	2002/0150981	A1	Canfield	Oct. 17, 2002
	2002/0168323	A1	Gonda et al.	Nov. 14, 2002
	2003/0027257	A1	Iatrou et al.	Feb. 6, 2003
	2004/0136955	A1	Barker	July 15, 2004
	2004/0137557	A1	DeFrees et al.	July 15, 2004
	2005/0143292	A1	DeFrees et al.	June 30, 2005
	2006/0111279	A1	DeFrees et al.	May 25, 2006
	4,055,635		Green et al.	Oct. 25, 1977
	4,088,538		Schneider	May 9, 1978
	4,179,337		Davis et al.	Dec. 18, 1979
	4,385,260		Watts et al.	May 24, 1983
	4,412,989		Iwashita et al.	Nov. 1, 1983
	4,414,147		Klibanov	Nov. 8, 1983
	4,496,689		Mitra	Jan. 29, 1985
	4,565,653		Ives et al.	Jan. 21, 1986
	4,806,595		Noishiki et al.	Feb. 21, 1989
	4,925,796		Bergh et al.	May 15, 1999
	5,153,265		Shadle, et al.	June 10, 1992
	5,154,924		Friden	Oct. 13, 1992
	5,169,933		Anderson et al.	Dec. 8, 1992
	5,182,107		Friden	Jan. 26, 1993
	5,346,696		Kim, et al.	Sept. 13, 1994
	5,352,670		Venot	Oct. 4, 1994
	5,369,017		Wong, et al.	Nov. 29, 1994
	5,374,541		Wong	Dec. 20, 1994
	5,405,753		Brossmer	April 11, 1995
	5,432,059		Bean	July 11, 1995
	5,492,841		Craig	Feb. 20, 1996
	5,527,527		Friden	June 18, 1996
	5,545,553		Gotschlich	Aug. 13, 1996
	5,614,184		Sytkowski et al.	Mar. 25, 1997
	5,621,039		Hallahan et al.	April 15, 1997
	5,672,683		Friden et al.	Sept. 30, 1997
	5,716,812		Withers et al.	Feb. 10, 1998
	5,728,554		Bayer et al.	Mar. 17, 1998
	5,833,988		Friden	Nov. 10, 1998
	5,834,251		Maras et al.	Nov. 10, 1998
	5,849,535	A	Cunningham et al.	Dec. 15, 1998

Examiner Signature	Date Considered
--------------------	-----------------

¹ EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Sheet	2	of	7	Attorney Docket Number	40853-01-5145-US01

	5,876,980		DeFrees et al.	Mar. 2, 1999
	5,922,577		DeFrees et al.	July 13, 1999
	5,932,462		Harris et al.	Aug. 3, 1999
	5,945,314		Prieto, et al.	Aug. 31, 1999
	5,969,040		Hallahan et al.	Oct. 19, 1999
	5,977,307		Friden	Nov. 2, 1999
	6,015,555		Friden	Jan. 18, 2000
	6,030,815		DeFrees et al.	Feb. 29, 2000
	6,037,452		Minamino et al.	Mar. 14, 2000
	6,057,292		Cunningham et al.	May 2, 2000
	6,087,325	A	Meers et al.	July 11, 2000
	6,096,512		Elhammer, et al.	Aug. 1, 2000
	6,166,183		Ishikawa et al.	Dec. 26, 2000
	6,183,738		Clark	Feb. 6, 2001
	6,261,805	B1	Wood	July 17, 2001
	6,362,254	A	Harris et al.	Mar. 16, 2002
	6,440,703	B1	DeFrees	Aug. 27, 2002
	6,555,346	B1	Kretzdorn et al.	April 29, 2003
	6,692,931		Reutter, et al.	Feb. 17, 2004
	7,125,843		DeFrees et al.	Oct. 24, 2006
	7,202,208		Papadimitriou	Apr. 10, 2007
	7,214,660		DeFrees et al.	May 8, 2007

FOREIGN PATENT DOCUMENTS					
Exr. Initials	Foreign Patent Document			Name of Inventor or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
	Country Code	Number	Kind Code (if known)		
		EP 0474313	A	Ingenieria Genetica y Biotechno	Mar. 11, 1992
		EP 0585109	A	Taniguchi Naoyuki	Mar. 2, 1994
		EP 0605963	A2	Wright	July 13, 1994
		WO 87/00056		Katre et al.	Jan. 15, 1987
		WO 87/05330	A1	Bergh et al.	July 23, 1998
		WO 89/10134	A1	Pardridge	Nov. 2, 1989
		WO 90/07572		Shak	July 12, 1990
		WO 92/18135		Bednarski et al.	May 15, 1993
		WO 94/05332		M'Timkulu	March 17, 1994
		WO 94/15625	A1	Hallahan	July 21, 1994
		WO 95/02421	A1	Friden	Jan. 26, 1995
		WO 96/32491		DeFrees et al.	Oct. 17, 1996
		WO 96/40731		Bona et al.	June 6, 1996
		WO 97/05330		Wasser	Feb. 13, 1997
		WO 98/31826		Paulson et al.	July 23, 1998
		WO 98/05363		Wei	Feb. 12, 1998
		WO 98/58964		Raju	Dec. 30, 1998
		WO 99/00150	A2	Pardridge	Jan. 7, 1999
		WO 99/22764	A1	Raju	May 14, 1999
		WO 00/23114		Biogen, et al.	April 27, 2000

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--------------------	-----------------

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	WO 00/65087		Das, et al.	Nov. 2, 2000	
	WO 01/49830	A2	Okkels et al.	July 12, 2001	
	WO 01/58935	A2	Andersen, et al.	Aug. 16, 2001	
	WO 01/60411	A1	Kondo	Aug. 23, 2001	
	WO 02/02597	A2	Okkels et al.	Jan. 10, 2002	
	WO 02/02764	A2	Nelsestuen, Gary L.	Oct. 1, 2002	
	WO 02/74806	A2	Rasmussen et al.	Sept. 26, 2002	
	WO 02/13843	A2	Gabathuler et al.	Feb. 21, 2002	
	WO 02/13873	A1	Gabathuler et al.	Feb. 21, 2002	
	WO 03/17949	A2	Neose Technologies, Inc.	Mar. 6, 2003	
	WO 03/31464	A2	Neose Technologies, Inc.	April 17, 2003	
	WO 04/99231	A2	DeFrees et al.	Nov. 18, 2004	

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS		
Exr Initials	Include Name of Author (in CAPITAL LETTERS), title of the article (where appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ₁
	Abeijon et al., 1986, J. Biol. Chem. 261(24):11374-11377	
	Abuchowski et al., 1977, J. Biol. Chem. 252:3582-3586	
	Abuchowski et al., 1984, Cancer Biochem. Biophys. 7:175-186	
	Abuchowski et al., 1977, J. Biol. Chem. 252:3578-3581	
	Ailor et al., 2000, Glycobiology 10:837-847	
	Allegre et al., 2006, J. Membrane Science 269:109-117	
	Altmann et al., 1999, Glycoconjugate J. 16:109-123	
	Aplin et al., 1981, CRC Crit Rev. Biochem. 259-306	
	Beauchamp et al., 1983, Anal Biochem. 131:25-33	
	Berger et al., 1988, Blood 71:1641-1647	
	Berg-Fassman et al. 1993, J. Biol. Chem. 268:14861-14866	
	Bhadra et al., 2002, Pharmazie 57:5-29	
	Bhatia et al., 1989, Anal. Biochem. 178:408-413	
	Bickel et al., 2001, Adv. Drug Deliv. Rev. 46:247-279	
	Bjoern, et al., 1992, J. Biol. Chem., 266(17):11051-11057	
	Boccu et al., 1983, Z. Naturforsch 38C:94-99	
	Boime et al., 1995, Endocrinology 136:2635-2640	
	Boissel et al., 1993, J. Biol. Chem. 268:15983-15993	
	Bouizar et al., 1986, Eur. J. Biochem. 155:141-147	
	Boyd et al., 1995, Mol. Immunol. 32:1311-1318	
	Browning et al., 1989, J. Immunol. 143:1859-1867	
	Bückmann et al., 1981, Makromol. Chem. 182:1379-1384	
	Burns et al., 2002, Blood 99:4400-4405	
	Busterbosch et al., 1996, Eur. J. Biochem. 237:344-349	
	Butnev et al., 1998, Biology of Reproduction 58:458-469	
	Byun et al., 1992, ASAIO Journal M649-M653	
	Casares et al., 2001, Nature Biotech 19:142-147	
	Chaffee et al., 1992, J. Clin. Invest 89:1643-1651	

Examiner Signature		Date Considered
--------------------	--	-----------------

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)			Complete if Known	
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				Group Art Unit 1654
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	Charter et al., 2000, Glycobiology 10:1049-1056
	Chern et al., 1991, Eur. J. Biochem. 202:225-229
	Chiba et al., 1995, Biochem J. 308:405-409
	Chrisey et al., 1996, Nucleic Acids Res. 24:3031-3039
	Clark, et al., 1996, J. Biol. Chem., 271(36):21969-21977
	Cointe, et al., 2000, Glycobiology, 10(5):511-519
	Conradt et al., 1987, J. Biol. Chem. 262:14600-14605
	Cope et al., 1991, Molecular Microbiology 5(5):1113-1124
	Copeland, Robert A., 2000, Enzymes, Second Edition, 146-150
	Crout et al., 1998, Curr. Opin. Chem. Biol. 2:98-111
	DeFrees, 2006, Glycobiology 16:833-843
	Delgado et al., 1992, Critical Reviews in Therapeutic 9:249-304
	Delgado et al., 1990, Biotechnol. Appl. Biochem. 12:119-128
	Detty et al., 1982, J. Org. Chem. 47:5416-5418
	Douglas, et al., 1991, J. Am. Chem. Soc., 113:5095-5097
	Dunn et al., 1991, Eds. Polymeric Drugs and Drug Delivery Systems, ACS Symposium Series Vol. 469, American Chemical Society, Washington D.C.
	Durieux, et al., 2001, Tetrahedron Letters, 42:2297-2299
	Dwek et al., 1995, J. Anat. 187:279-292
	Eavarone et al., 2000, J. Biomed Mater. Res. 51:10-14
	Fan et al., 1997, J. Biol. Chem. 272(43):27058-27064
	Fibi et al., 1995, Cells Blood 85:1229-1236
	Fischer et al., 1998, Thrombosis Research 89:147-150
	Flynn et al., 2000, Curr. Opin. Oncol. 12:574-581
	Garnett et al., 2002, Advanced Drug Delivery Reviews 53:171-216
	Gatot, et al., 1998, J. Biol. Chem., 273(21):12870-12880
	Gillis et al., 1988, Behring Inst. Mitt. August 83:1-7
	Ginns, Dr. Edward, PEG Glucocerebrosidase, Internet page from www.gaucher.org.uk/peg2.prg, printed June 21, 2002
	Gotschlich, Emil C., 1994, J. Exp. Med., Coden: Jemeav; ISSN: 0022-1007, 180(6):2181-90
	Grabenhorst, et al., 1993, Euro. J. Biochem., 215:189-197
	Groberg et al., 1993, Eur. J. Biochem. 218:597-601
	Gross, H.J., 1992, Eur. J. Biochem. 203(1-2):269-275
	Hall et al., 2001, Methods in Molecular Biology 166:139-154
	Haneda et al., Carbohydr. Res. 292:61-70
	Hang et al., 2001, J. Am. Chem. Soc. 123:1242-1243
	Harris, 1985, Macromol. Chem. Phys. C25: 325-373
	Harris et al., 2003, Nature Reviews Drug Discovery, 2:214-221
	Hayes et al., 1993, J. Biol. Chem. 268(22):16170-16178
	Hellstrom et al., 2001, Methods in Molecular Biology 166:3-16
	Hermanson et al., 1992, Immobilized Affinity Ligand Techniques, Academic Press
	Hermanson, 1996, Bioconjugate Techniques, Academic Press, San Diego
	Hermentin, et al., 1996, Glycobiology 6(2):217-230
	Hills et al., 2002, American Biotechnology Laboratory, 20(11):30

Examiner Signature	Date Considered
--------------------	-----------------

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Sheet	5	of	7	Attorney Docket Number
40853-01-5145-US01				

Hollister et al., 2001, Glycobiology 11:1-19
Hounsell et al., 1996, Glycoconj. J. 13:19-26
Ichikawa et al., 1992, J. Am. Chem. Soc. 114:9283-9298
Inoue et al., 1995, Biotechnology Annual Review 1:297-313
Ito et al., 1993, Pure & Appl. Chem. 65(4):753-762
Jackson et al., 1987, Anal. Biochem. 165:114-127
Jarvis et al., 1998, Curr. Opin. Biotechnol. 9:528-533
Joppich et al., 1979, Makromol Chem. 180:1381-1384
Joshi et al., 1990, J. Biol. Chem. 265:14518-14525
Jung et al., 1983, Biochem. Biophys. Acta, 761:152-162
Kalsner et al., 1995, Glycoconj. J. 12:360-370
Kasina et al., 1998 Bioconjugate Chem., 9:108-117
Katre et al., 1987, Proc. Natl. Acad. Sci. U.S.A. 84:1487-1491
Keppler et al., 2001, Glycobiology 11:11R-18R
Kitamura et al., 1990, Biochem. Biophys. Res. Commun. 28:1387-1394
Kitamura et al., 1991, Cancer Res. 51:4310-4315
Kodama et al., 1993, Tetrahedron Lett. 34:6419-6422
Koeller et al., 2000, Nature Biotechnology 18: 835-841
Koeller et al., 2001, Nature, 409:232-240
Koide et al., 1983, Biochem Biophys. Res. Commun. 111:659-667
Kreitmann 2001, Current Pharmaceutical Biotechnology 2:313-325
Kuhn, et al., 1995, J. Biol. Chem. 270(49):29493-29497
Lai et al, 1986, J. Biol. Chem. 261:3116-3121
Lee-Huang et al., 1984, Proc. Natl. Acad. Sci. U.S.A. 81:2708-2712
Lee et al., 1989, Biochemistry 28:1856-1861
Leung, S., 1995, J. Immunology, 154:5919-5926
Li et al., 2002, Trends in Pharmacological Sciences 23:206-209
Li et al., 2002, Medicinal Research Reviews 22:225-250
Liu et al., 2002, 1996, Chem. Eur. J. 2:1359-1362
Long et al., 2006, Experimental Hematology 34:697-704
Lord et al., 2001, Clin. Cancer Res. 7:2085-2090
Lougheed et al., 1999, J. Biol. Chem. 274:37717-37722
Luckow et al., 1993, Curr. Opin. Biotechnol 4:564-572
Lund et al., 1995, FASEB J. 9:115-119
Lund et al., 1996, J. Immunol. 157:4963-4969
Mahal et al., 1997, Science 276:1125-1128
Maranga et al., 2003, Biotechnology and Bioengineering 84(2):245-253
Maras et al., 2000, Molecular cloning and enzymatic characterization of a Trichoderma reesei , 2- α -D-mannosidase, 77:255-263
Miller et al., 1993, Curr. Opin. Genet. Dev. 3:97-101
Min et al., 1996, Endocr. J. 43:585-593
Mistry et al., 1996, Lancet 348:1555-1559
Morimoto et al., 1996, Glycoconjugate J. 13:1013-1020

Examiner Signature		Date Considered
--------------------	--	-----------------

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)			Complete if Known	
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NCBI – Accession No. NCA26095 (2 pgs.)
NCBI – Accession No. NP_999299 (2 pgs.)
NCBI – Accession No. NP_058697 (3 pgs.)
NCBI Database hits for erythropoietin protein sequences (3 pgs.)
Nilsson et al., 1984, Methods Enzymol. 104:56-69
O'Connell et al., 1992, J. Biol. Chem. 267:25010-25018
Oetke, et al., 2002, J. Biol. Chem 277(8):6688-6695
Olson et al., 1999, J. Biol. Chem. 274:29889-29896
Palacpac et al., 1999, PNAS USA 96:4692-4697
Park et al., 1986, J. Biol Chem. 261:205-210
Paulson et al., 1997, J. Biol. Chem. 252:8624-8628
Plummer et al., 1995, J. Biol. Chem. 270(22):13192-13196
PNGase-F Amidase Sequence from F. Meningosepticum (Registry numbers 128688-70-0)
PNGase-F Amidase Sequence from F. Meningosepticum (Registry numbers 128688-71-1)
Pyatak et al., 1980, Res. Commun. Chem. Pathol Pharmacol 29:113-127
Rabouille et al., 1999, J. Cell. Biol. 112:3319-3330
Reff et al., 2002, Cancer Control 9:152-166
Rosenthal, et al., 1994, Methods Enzymol. 235:253-285
Sadler et al., 1982, Methods in Enzymology 83:458-514
Saneyoshi et al., 2001, Biology of Reproduction 65:1686-1690
Saxon et al., 2000, Science 287:2007-2010
Schwientek et al., 1994, Gene 145:299-303
Scouten 1987, Methods in Enzymology 135:30-65
Shah et al., 1996, J. Pharm. Sci. 85:1306-1311
Shapiro et al., 2005, B. Biochemistry 105:518-525
Singh et al., 1996, Chem. Commun. 1996:993-994
Sinha et al., 1980, Infection and Immunity 29(3):914-925
Song et al., 2002, J. Pharmacol. Exp. Ther. 301:605-610
Srinivasachar et al., 1989, Biochemistry 28:2501-2509
Stephens et al., 1983, European J. of Biochem., 135(3):519-27
Stephens et al., 1983, European J. of Biochem., 133(3):481-9
Stephens et al., 1983, European J. of Biochem., 133(1):155-62
Takane et al., 2000, J. Pharmacology and Experimental Therapeutics 294:746-752
Takeda et al., 1995, Trends Biochem. Sci. 20:367-371
Takeuchi, et al., 1990, The Journal of Biological Chemistry, 265(21): 12127-12130
Tanner et al., 1987, Biochim. Biophys. Acta., 906:81-91
Taylor et al., 1991, Protein Immobilization Fundamentals and Applications, Manual
Thotakura et al., 1987, Meth Enzymol 138: 350-359
Tsuboi et al., 2000 Archives of Biochemistry and Biophysics 374:100-106
Tuddenham, E., 2002, Nature 419:23-24
Udenfriend et al., 1995, Ann. Rev. Biochem. 64:563-591
Ulloa-Aguirre et al., 1999, Role of Glycosylation in Function of Follicle-Stimulating Hormone,

Examiner Signature	Date Considered
--------------------	-----------------

Substitute for form 1449A/PTO		Complete if Known			
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		Examiner Name	Heard, Thomas Sweeney		
Sheet	7	of	7	Attorney Docket Number	40853-01-5145-US01

Endocrine 11:205-215
Uludag et al., 2002, Biotechnol. Prog. 18:604-611
Urdal et al, 1984, J. Chromatog, 296:171-179
Van Berkel et al., 1996, Biochem J. 319:117-122
Veronese et al., 1985, Appl. Biochem. Biotech. 11:141-152
Vocadlo et al., 2000, In Carbohydrate Chemistry and Biology, Vol. 2
Vyas et al., 2001, Crit. Rev. Ther. Drug Carrier Syst. 18:1-76
Wang et al., 1996, Tetrahedron Lett. 37:1975-1978
Wang, M., 1998, Protein Engineering 11(12):1277-1283
Wellhoner et al., 1991, J. Biol. Chem. 226:4309-4314
Witte K. et al., 1997, J. Am. Chem. Soc. 119:2114-2118
Woghiren et al., 1993, Bioconjugate Chem. 4:314-318
Wong et al., 1992, Enzyme Microb.Technol. 14:866-874
Wong et al., 1996, Biotechnology and Bioengineering 49:659-666
Woods et al., 1989, Eur. J. Cell. Biol. 50:132-143
Wright et al., 1998, J. Immunol. 160:3393-3402
Wu et al., 2002, J. Drug targeting 10:239-245
Xing et al., 1998, Biochem. J. 336:667-673
Yamamoto et al., 1998, Carbohydr. Res. 305:415-422
Yarema et al., 1998, J. Biol. Chem. 47:31168-31179
Yoshida et al., 1999, Glycobiology 9:53-58
Yoshitake et al., 1985, Biochemistry 24:3736-3750
Zalipsky 1995, Bioconjugate Chem. 6:150-165
Zalipsky et al., 1992, Poly (ethylene glycol) Chemistry: Biotechnical and Biomedical Applications 347-370
Zheng et al., 1999, Biotechnology and Bioengineering 65(5):600-604
Zhou, et al., 1994, Mol. Microbiol. 14(4):609-618

DB2/20909294.1

Examiner Signature		Date Considered	
--------------------	--	-----------------	--